

A pill to fade traumatic memories? It's possible

Doctors continue study in finding the right drug

THE ASSOCIATED PRESS

Suppose you could erase bad memories from your mind. Suppose, as in a recent movie, your brain could be wiped clean of sad and traumatic thoughts.

That is science fiction. But real-world scientists are working on the next best thing. They have been testing a pill that, when given after a traumatic event like rape, may make the resulting memories less painful and intense.

Will it work? It is too soon to say. Still, it is not far-fetched to think that this drug someday might be passed out along with blankets and food at emergency shelters after disasters like the tsunami or Hurricane Katrina.

Psychiatrist Hilary Klein could have offered it to the man she treated at a St. Louis shelter over the Labor Day weekend. He had fled New Orleans and was so distraught over not knowing where his sisters were that others had to tell Klein his story.

"This man could not even give his name, he was in such distress. All he could do was cry," she said.

Such people often develop post-traumatic stress disorder, or PTSD, a problem first recognized in Vietnam War veterans. Only 14 percent to 24 percent of trauma victims experience long-term PTSD, but sufferers have flashbacks and physical

RII SUMMARY

BAD MEMORIES

Up to a quarter of the people who live through a traumatic event suffer long term, having flashbacks and reliving horrific experiences — from war to rape to car crashes.

TRAUMA PILL

Scientists are testing a pill that may blunt memory formation and prevent post-traumatic stress disorder. They also are testing the drug to try to cure people who already suffer from PTSD.

RESULTS

So far, experiments are too small to tell if the pill will work, although scientists at several institutions are optimistic, and larger studies are under way.

— The Associated Press

symptoms that make them feel as if they are reliving the trauma years after it occurred.

Scientists think it happens because the brain goes haywire during and right after a strongly emotional event, pouring out stress hormones that help store these memories in a different way than normal ones are preserved.

Taking a drug to tamp down these chemicals might blunt memory formation and prevent PTSD, they theorize.

Some doctors have an even more ambitious goal: trying to cure PTSD. They are deliberately triggering very old bad memories and then giving the pill to deep-six them.

The first study to test this approach on 19 longtime PTSD sufferers has provided early encouraging results, Canadian and Harvard University researchers report.

"We figure we need to test about 10 more people until we've got solid evidence," said Alain Brunet, a psychologist at McGill University in Montreal who is leading the study.

It can't come too soon.

The need for better treatment grows daily as American troops return from Iraq and Afghanistan with wounded minds as well as bodies. One government survey found almost 1 in 6 showing symptoms of mental stress, including many with post-traumatic

stress disorder. Disability payments related to the illness cost the government more than \$4 billion a year.

The need is even greater in countries ravaged by many years of violence.

"I don't think there's yet in our country a sense of urgency about post-traumatic stress disorder" but there should be, said James McGaugh, director of the Center for the Neurobiology of Learning and Memory at the University of California at Irvine.

He and a colleague, Larry Cahill, did experiments that changed how scientists view memory formation and suggested new ways to modify it.

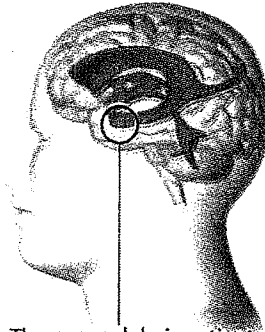
Memories, painful or sweet, don't form instantly after an event but congeal over time. Like slowly hardening cement, there is a window of opportunity when they are shapable.

During stress, the body pours out adrenaline and other "fight or flight" hormones that help write memories into the "hard drive" of the brain, McGaugh and Cahill showed.

Propranolol can blunt this. It is in a class of drugs called beta blockers and is the one most

Targeting emotions

Scientists have been testing a pill that could make memories from a traumatic event less intense.



The amygdala is activated during stress and produces some of the "fight or flight" chemicals that this drug may block

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able to cross the blood-brain barrier and get to where stress hormones are wreaking havoc. It already is widely used to treat high blood pressure and is being tested for stage fright.

Dr. Roger Pitman, a Harvard University psychiatrist, did a pilot study to see whether it could prevent symptoms of PTSD. He gave 10 days of either the drug or dummy pills to accident and rape victims who came to the Massachusetts General Hospital emergency room.

In follow-up visits three months later, the patients listened to tapes describing their traumatic events as researchers measured their heart rates, palm sweating and forehead muscle tension.

The eight who had taken propranolol had fewer stress symptoms than the 14 who received dummy pills, but the differences in the frequency of symptoms were so small they might have occurred by chance — a problem with such tiny experiments.

Still, "this was the first study to show that PTSD could be prevented," McGaugh said, and enough to convince the federal government to fund a larger one that Pitman is doing now.

Meanwhile, another study on assault and accident victims in France confirmed that propranolol might prevent PTSD symptoms.

One of those researchers, Brunet, now has teamed with Pitman on the boldest experiment yet — trying to cure long-time PTSD sufferers.

"We are trying to reopen the window of opportunity to modulate the traumatic memory," Pitman said.

The experiments are being

done in Montreal and involve people traumatized as long as 20 or 30 years ago by child abuse, sexual assault or a serious accident.

"It's amazing how a traumatic memory can remain very much alive. It doesn't behave like a regular memory. The memory doesn't decay," Brunet said.

To try to make it decay, researchers ask people to describe the trauma as vividly as they can, bringing on physical symptoms like racing hearts, then give them propranolol to blunt "restorage" of the memory. As much as three months later, the single dose appears to be preventing PTSD symptoms, Brunet said.

Klein said it would be great to have something besides sleep aids, antidepressants and counseling to offer traumatized people, but she remains skeptical about how much long-term good propranolol can do.

"If there were a pill to reduce the intensity of symptoms, that would be a relief," she said. "But that's a far step from being able to prevent the development of PTSD."

Practical matters may limit propranolol's usefulness. It must be given within a day or two of trauma to prevent PTSD.

Only more study will tell whether that is truly possible.

① How does the pill work? Explain.

② Describe any positive + negative approaches to this.

③ Is this a good idea? Should memories stay as a part of us? Are they something we should be able to dispose of? Explain.